

What is claimed is:

1. A process for forming a continuous, unsupported, multizone phase inversion microporous membrane having at least two zones, comprising of the acts of:
 - operatively positioning at least one dope applying apparatus
 - 5 having at least two polymer dope feed slots relative to a continuously moving coating surface;
 - cooperatively applying polymer dopes from each of the dope feed slots onto the continuously moving coating surface so as to create a multiple layer polymer dope coating on the coating surface; and
 - 10 subjecting the multiple dope layer coating to contact with a phase inversion producing environment so as to form a wet multizone phase inversion microporous membrane.
2. The process of claim 1 wherein the polymer dope comprises:
 - nylon.
3. The process of claim 1 wherein the polymer dope comprises:
 - polyvinylidene fluoride.
4. The process of claim 1 wherein the polymer dope comprises:
 - polyether sulfone.
5. The process of claim 1 further comprising the acts of:
 - washing and drying the membrane.
6. The process of claim 1 wherein the multizone membrane has a type II configuration.
7. The process of claim 1 wherein the multizone membrane has a type III configuration
8. The process of claim 1 wherein the multizone membrane has a type IV configuration
9. The process of claim 1 wherein the multizone membrane has a type V configuration
10. The process of claim 1 wherein the multizone membrane has a type VI configuration

11. The process of claim 1 wherein the multizone membrane has a type VII configuration

12. The process of claim 1 wherein the multizone membrane has a type VIII configuration

13. The process of claim 1 wherein the multizone membrane has a type IX configuration

14. The process of claim 1 wherein the multizone membrane has a type I configuration.

15. A process for forming a continuous, unsupported, multizone phase inversion microporous membrane having at least two zones, comprising of the acts of:

operatively positioning at least two dope applying apparatus,
5 each having at least one polymer dope feed slot, relative to a coating surface;

applying polymer dope from each of the dope applying apparatus onto the coating surface so as to create a multiple layer polymer dope coating on the coating surface; and

10 subjecting the multiple layer polymer dope coating on the coating surface to contact with a phase inversion producing environment so as to form a wet multizone phase inversion microporous membrane.

16. The process of claim 15 wherein the polymer dope comprises:

nylon.

17. The process of claim 15 wherein the polymer dope comprises:

polyvinylidene fluoride.

18. The process of claim 15 wherein the polymer dope comprises:

polyether sulfone.

19. The process of claim 15 further comprising the acts of: washing and drying the membrane.

20. The process of claim 15 wherein the multizone membrane has a type I configuration.

21. The process of claim 15 wherein the multizone membrane has a type II configuration.

22. The process of claim 15 wherein the multizone membrane has a type III configuration.

23. The process of claim 15 wherein the multizone membrane has a type IV configuration.

24. The process of claim 15 wherein the multizone membrane has a type V configuration.

25. The process of claim 15 wherein the multizone membrane has a type VI configuration.

26. The process of claim 15 wherein the multizone membrane has a type VII configuration.

27. The process of claim 15 wherein the multizone membrane has a type VIII configuration.

28. The process of claim 15 wherein the multizone membrane has a type IX configuration.

29. A multizone, unsupported, membrane comprising:
a first zone having a first pore size; and
at least a second zone having a second pore size, the first and
second zones being operatively connected such that the multizone membrane is
5 continuous and does not include any support material.

30. The multizone membrane of claim 29 wherein the first zone is formed from a first polymer dope for producing one pore size and the at least a second zone is formed from at least a second polymer dope for producing at least one different pore size.

31. The multizone membrane of claim 29 wherein the polymer dope comprises:
nylon.

32. The multizone membrane of claim 29 wherein the polymer dope comprises:
polyvinylidene fluoride.

33. The multizone membrane of claim 29 wherein the polymer dope comprises:
polyether sulfone.

34. The multizone membrane of claim 29 wherein the multizone membrane has a type I configuration.

35. The multizone membrane of claim 29 wherein the multizone membrane has a type II configuration.

36. The multizone membrane of claim 29 wherein the multizone membrane has a type III configuration.

37. The multizone membrane of claim 29 wherein the multizone membrane has a type IV configuration.

38. The multizone membrane of claim 29 wherein the multizone membrane has a type V configuration.

39. The multizone membrane of claim 29 wherein the multizone membrane has a type VI configuration.

40. The multizone membrane of claim 29 wherein the multizone membrane has a type VII configuration.

41. The multizone membrane of claim 29 wherein the multizone membrane has a type VIII configuration.

42. The multizone membrane of claim 29 wherein the multizone membrane has a type IX configuration.